THE FOREIGN TRADE OF THE UNITED STATES FROM 1820 TO 1840.[1]

II.

THE export of first importance during the third decade of the century was cotton. Its value for the ten years was 256 million dollars. This was 48 per cent. of the total value of domestic exports and 44 per cent. of the value of all imports retained for home consumption.

The cotton crop for the year 1820 was 160 million pounds.[2] As cotton picking usually began in August, the period within which the crops were marketed probably coincided pretty closely with the succeeding fiscal year, which then opened October 1. The exports for the fiscal year 1821 were 78 per cent. of the crop in 1820. The crop increased to 180 million pounds in 1821, but the European demand was growing so fast that our exports in the fiscal year 1822 absorbed 99 per cent. of this 20 million pounds increment. This would indicate that practically all the increase in the demand for home consumption was satisfied from reserve stocks. The probability that this home demand was not increasing very rapidly is suggested by the fact that the export price, which had been 16⅛ cents in 1821, was increased only ½ cent by the remarkable growth of the European demand.[3] These prices seem to have been high enough to encourage the extension of cotton planting, for the crop in 1822 was 210 million

[1] Part I was published in this JOURNAL, vol. viii. No. 1, pp. 34–57. The authority for all statements in this article, as to the quantity and value of exports and imports is the *United States Reports on Commerce and Navigation.* The tables in the appendix give the most important facts in a form convenient for reference.

[2] The figures on the production of cotton are those found in the report of Secretary of the Treasury Woodbury, dated Feb. 29, 1836. *Executive Document* XXIV Congress, first session, vol. iv. No. 146, p. 7.

[3] This does not mean that the manufacturers were not prospering, or that their consumption of cotton was not rapidly increasing, but it does point to the fact that this was the period in which household manufactures were rapidly declining.

pounds. In the next fiscal year 97 per cent. of this 30 million pounds increment in the crop was exported. It was necessary to reduce the export price to 11¼ cents in order to market such a quantity abroad. Evidently domestic demand was still sluggish. Either these low prices discouraged the planting of so large an acreage, or 1823 was an unfavorable crop year, for the production declined to 185 million pounds. Our own cotton factory system had now developed to a point where its consumption began to be of more influence in the market. In 1823 but 17 per cent. of the crop of the previous year had been retained for home consumption, but in 1824 23 per cent. was retained. This made necessary a decrease in the quantity exported amounting to over 30 million pounds. England increased her imports from other sources over 17 per cent in the calendar year 1824. But, in spite of that, her demand was so active that the decreased supply from the United States in the fiscal year 1824 was valued at 15¼ cents a pound. Because of this increase in price the 143.4 million pounds exported in 1824 were worth more by 1.5 million dollars than the 173.7 million pounds exported the previous year.

The influence of a higher price upon the amount produced is at once observed. The crop of 1824 was 30 million pounds larger than that of 1823 and five million pounds in excess of that in any previous year. It came upon the market just in time to reap the benefit of the abnormal demand resulting from the great speculative movement in England in 1824 and 1825.[1] The high prices resulting from the speculation in England discouraged purchases by our own manufacturers and those of France. However, exports to England alone increased over 42 million pounds in the fiscal year 1825, and the export price for the year was 21¼ cents. The value exported to England in 1824 was 15 million dollars, in 1825 30 million dollars. The

[1] On the speculative movement in prices in England in 1824 and 1825 see TOOKE'S *History of Prices*, vol. ii. pp. 142–146. On page 144 he says: "Cotton, from its importance, and from its affording, in the first instance, the fairest grounds for investment, became a prominent object of speculation on the most extensive scale, and at exorbitant prices."

increase in the total value of cotton exported was 59 per cent. There was no increase in the exports to other countries. The high prices greatly stimulated the opening up of new plantations and the crop of 1825 amounted to 255 million pounds, or 40 million pounds more than that of the previous year. The speculation in England had collapsed before any considerable part of this crop had been marketed. Fortunately, the stocks held in the United States were very low, and the brisk domestic demand enabled the planters to sell considerable quantities of the new crop in the fall of 1825 at quite high prices. A southern newspaper quoted in *Niles' Register*, gives the ruling price for cotton in the South during 1825 as 20 cents.[1] England, however, was holding large quantities of the cotton purchased during the speculative movement, and cotton could not be sold there without great reductions in the price. Nevertheless, in spite of the fact that France imported twice as much as in the preceding year, and that the amount retained for home consumption increased nearly one third, it was still necessary to sell 134 million pounds in England during the fiscal year 1826, at whatever price could be obtained. The consequence was that the export price for the year fell to 12¼ cents. But the influence of the English cotton speculation on the fortunes of the southern planter had not yet exhausted itself. As we have said before, the ruling price in the South during 1825 had been about 20 cents. Elated by this high price, and with their customary blindness to the effect of oversupply on prices, the planters in the spring of 1826 seem to have put every available foot of ground into cotton. The result was a crop of 350 million pounds, an increase of 95 million pounds over that of the preceding year. The planter got from 6¼ cents to 12½ cents for this crop, and ought to have considered himself fortunate, for, in order to dispose of it at all, it was necessary to export to France twice as much as her average import in 1824 and 1825, and to England more than twice as much as she had taken in 1824.[2]

[1] *Niles Register*, vol. xxx. p. 161.

[2] Secretary Woodbury gives the average price of cotton in 1826 as 11 cents.

The decreased price resulted, as was to be expected, in a very large decrease in the crop for 1827. Its amount was but 270 million pounds. The importations of Europe, however, had been far beyond her capacity for consumption and in consequence our exports fell off even more than the crop. The decrease in the crop was 80 million pounds; in the exports 84 millions. This great decrease in production had hardly kept pace with the decreased demand for that year, and, as a consequence, the export price fell from 12¼ to 10 cents. Yet, for some reason, the planters thought fit to increase their output again, and the crop for 1828 amounted to 325 million pounds. They were not too sanguine in their operations if the prices they had been receiving were satisfactory, for the additional exports in 1829 absorbed the entire 55 million pounds increment in the crop at a slight increase in price. Encouraged by this rapid revival in the demand the planters again increased their acreage and the crop for 1829 was 15 million pounds in excess of the great crop of 1826, and 40 millions in excess of that of the previous year. There was very little change in prices, yet exports increased 34 million pounds.

Can we obtain any information in regard to the conditions governing cotton production and exportation in the United States from the data just passed in review? It is evident that for 1825 and 1826, they were indicative of speculative conditions in England, quite as much as of economic and industrial conditions in the United States. It will be easier, therefore, to deal with the years in which such complications do not have to be considered. During the years 1821–1824, 586.7 million pounds of cotton were exported. Its export valuation, as returned by the custom-house officers, was 87.49 million dollars. During the years 1827–1830 the quantity exported was 1068.2 million pounds, and its value 108.1 million dollars. We had increased the quantity exported 82 per cent. but while doing so had increased the value received in return only 23½ per cent. The improved conditions for cotton production in the United States had reduced its price about five cents, or nearly one third. This improvement in conditions had

been brought about by the opening up of cheaper and better lands, by the increase in the number of slaves and the reduced cost of maintaining them, by the reduced cost of packing and transporting the cotton, and by the general reduction in the price of commodities purchased by the planters.

How fast the opening up of new plantations was being carried on is indicated by the fact that within the settled area west of Pennsylvania and south of the Potomac the density of the population actually decreased from 1820 to 1830.[1] Mr. M. B. Hammond says:

> In the decade ending with 1820, the superiority of the prairie lands and river bottoms for cotton growing began to be appreciated, and by 1830 the western country had outstripped the eastern states in production. . . . . In 1811, $\frac{5}{6}$ of the cotton crop was raised in the Atlantic coast states, Virginia, North Carolina, South Carolina and Georgia, and in 1821 these states still produced over $\frac{2}{3}$ of the total crop. Five years later, however, the states of Alabama, Mississippi, and Tennessee almost equaled the Atlantic coast states in cotton production, having raised over $\frac{3}{7}$ of the entire crop grown that year, and by 1833 they were in the lead, producing $\frac{6}{11}$ of the entire crop.[2]

One does not get a full appreciation of the expansion of cotton planting territory from these quotations. Mr. Hammond has included Georgia among the older states, but the increase of occupied area in that state was probably as great during this decade as in any other southern state except Tennessee. The increase in her white population was 107,000, in Alabama's 105,000, in Tennessee's 196,000. The increase was far below 100,000 in every other southern state. Moreover, the lands occupied in 1820 were in the northern and eastern sections of the state, and were not adapted to cotton culture, while those in the southern and western parts of the state, taken up during this decade, were first-class cotton lands. I have already mentioned the considerable increase of the cotton crop in 1825 as an indication that many new plantations were being opened up. According to contemporary estimates the cotton crop of Georgia increased 38 per cent.

[1] *United States Census Reports*, 1880.

[2] M. B. HAMMOND, *The Cotton Industry*, p. 70. *Ibid.*, p. 247.

in that year, that of the gulf states 25 per cent., and that of South Carolina only 16 per cent.[1]

That the decrease in the price of cotton was largely due to the competition of these fresh fields is further evidenced by the restriction of production in South Carolina below the capacity of the state at higher prices. The extent of this restriction is indicated by the great increase in the product of that state in 1826, evidently in consequence of the high prices obtained from the previous crop. Her increase in that year was 52 per cent., while that of the western states was but 31 per cent., and that of Georgia only 23.[2] All these indications seem to warrant the conclusion that the cheaper and better lands of the new plantations were very largely responsible for the reduced cost of production. The extent of the exodus to these lands may be emphasized by further reference to the *Census Report*. The increase of the white population of South Carolina was only 8½ per cent. or less than ¼ the rate for the entire country. The increase in Alabama and Mississippi was over 100 per cent. The absolute amount of increase in Tennessee was nearly ten times, and that in each of the states, Alabama and Georgia, was over five times as much as in South Carolina.

It is probable, however, that even South Carolina was able to push the production of cotton upon fields that could not have been profitably cultivated in former years. The increase in the planter's stock of negro laborers made it possible for him to cultivate an increased area at a less cost. The increase in the average planter's stock of slaves is shown by the fact that while in 1820 but 32 in every 100 persons in the state were slaves, in 1830 they had increased to 36 in every 100. The rapid opening up of plantations in the southwest was, however, the more important effect of the general increase in the number of slaves. The extent to which the increase was used in this way is indicated by the fact that while the white population in the

[1] *Niles*, vol. xxxii. p. 63. The totals given in *Niles* indicate plainly that they apply to the crop years 1824 and 1825.

[2] *Niles*, vol. xxxiii. p. 217.

Gulf states increased 74 per cent. during the decade, the number of slaves showed the remarkable gain of 158 per cent.

Not only did the cotton planters have more slaves, but the individual slave was a source of less expense to his owner. The food of the slaves was never a great expense, as they were expected to raise their own to a large extent, but the masters had to provide material for their clothing. The material generally used was called negro cloth. The price of this cloth was 50 per cent. less in 1830 than in 1815, and from 20 to 25 per cent. less than in the first half of the decade.

Although the prairie lands and river bottoms of the West were much more productive than the plantations in South Carolina, this alone could not have brought those located in Tennessee and northern Alabama under cultivation had it not been for the great reduction in the cost of transportation during the decade. This reduction had been brought about to a large extent in the South and West by the use of steamboats. The number of these boats in use on the western rivers was 72 in 1820 and 213 in 1830.[1]

The other expenses connected with marketing the cotton had also been reduced. The cost of cotton bagging in 1830 was less than half what it had been in the early twenties.[2] A similar reduction had also taken place in the price of the strap iron used for cotton ties.

Cheaper transportation had decreased the planter's expense for supplies in general, as well as the cost of marketing his product. Moreover, in 1830, the factories of Pittsburg and Cincinnati were supplying the Southwest with machinery, steam engines, furniture, etc., at prices in those towns below what many of the same articles would have cost in Philadelphia or New York ten years before, and, of course, very much below Pittsburg and Cincinnati prices at that time.[3] Some instances of changes in Pittsburg prices will illustrate the extent of this decrease. In 1820 the price of bar iron was $200 a ton, in

[1] *Niles*, vol. xxxviii. p. 97.

[2] *Niles*, vol. xxxviii. p. 140.

[3] *Ibid.*, pp. 292, 293.

1830 $100 a ton. Prices of boiler iron for the given dates were respectively $350 and $140 a ton; sheet iron $18 and $8.50 a cwt.; hoop iron, $250 and $120 a ton; axes, $24 and $12 a dozen; other farm tools, steam engines, stoves, etc., from one third to one half as much in 1830 as in 1820. The average price of sugar in Philadelphia in 1820 was $10.50 a cwt., in 1830 only $7.62. Sheetings, the factory price of which was 18 cents in 1820, were sold for 8¾ cents in 1830.[1]

It was the reduced cost of production brought about by the conditions that have been passed in review, that caused the increase of our cotton crop from 160 million pounds in 1820 to 365 millions in 1829, in spite of the decrease of 33⅓ per cent. in its price per pound. It would seem, indeed, that a man starting in the business in 1830 would have obtained a higher profit than one engaged in it in 1820, had it not been for the single item of increased cost of slaves.[2] The conditions that made 10-cent cotton a possibility in the United States from 1826 to 1832 were of special importance because the low price of this cotton in connection with its excellent quality established our position as the source of supply for the cotton manufacturers of Europe. Moreover, it gave the increase in the consumption of cottons throughout the world such an impetus that in the eight years following 1832, in spite of the great increase of raw cotton production, its average export price was over 25 per cent. higher than in 1832.

The protection afforded the cotton manufacturers of the United States by the tariff, was effective in bringing about this increased demand for cotton. The difference between the total cotton production for the years 1820–1824 and the total exports of the years 1821–1825 was 188 million pounds. This must correspond roughly to the amount of home consumption during the first half of the decade. Estimated in the same way it amounted to 292 million pounds during the second half. This indicates an

[1] *General Convention of the Friends of Domestic Industry assembled at New York October 26, 1891*, *Reports of Committees*, pp. 18, 71, 114.

[2] HAMMOND, pp. 51, 52.

increase in the home consumption of about 55 per cent.[1] This increase was by no means in proportion to the increase in the capacity of the factories, it must be remembered that during this period the household manufactures gave up to a large extent their unequal contest with the power looms. The manufacturers had been generally prosperous. They usually ascribed such trouble as they had to excessive competition and overproduction among themselves. One of them thus describes the conditions prevailing shortly before the passage of the tariff act of 1824: "By the present tariff, cotton yarn, as fine as No. 30, and the goods made out of such yarn, is fully protected, as it regards foreign competition; but in consequence of the business being good in the years 1820, '21 and '22, capitalists were induced to invest their money so plentifully, and spindles and looms multiplied so rapidly, that the consumption could not keep pace with them; in consequence, the domestic competition has rendered the business a losing one, and cotton goods of the description stated are sold . . . . cheaper than they can be imported free of duty."[2] A North Carolina editor expressed the opinion in the fall of 1825 that cotton was 4 cents a pound higher than it would have been, if there had been no demand from the Northern manufacturers. It is hardly necessary, however, to quote opinions to convince one that the demand of customers who took 20 per cent. of the whole crop in the first half of the decade and 19 per cent. in the second must have had a very decided effect on the price.

In closing the study of cotton production and exportation, the facts deserving emphasis may be summarized as follows: The differential advantages of the United States as a producer of cotton were greater than in any other line; these advantages were so increased during the decade that cotton planting was probably as profitable throughout the country in 1830 as in

[1] Ellison makes the increase in our consumption about 46 per cent. But it is not probable that he has taken into consideration the cotton that was shipped up the Mississippi River for consumption in the West. T. ELLISON, *Cotton Trade of Great Britain*, p. 100.

[2] *Niles*, vol. xxv. p. 290.

1820. This ability to produce at a low price at that time was of special importance, because it secured our position as the source of supply for European manufacturers. The great increase in the production of cotton had caused a similar increase in the demand for the slaves raised in the border states, and the foods and other commodities produced in the upper Mississippi valley.

The export next to cotton in importance was tobacco. Its value for the decade was 56.9 million dollars, or but little over one fifth as much as that of cotton. The value exported in 1830 was less than that in 1820. The value in the first five years was 1.4 million dollars more than in the last. The quantity exported in the first half of the decade was 403,000 hogsheads, in the last 421,000. These figures indicate that if the United States should have increased the quantity of her tobacco exports materially, it would have been as disastrous to the price as were the increased exports of cotton. Holland and England, who were our leading tobacco customers, both took less tobacco in the last half of the decade than in the first. France increased her purchases, but the change is to be attributed in part to our increased indulgence in the wines and silks of that country. Evidently the high-priced slave labor resulting from the expansion in cotton production restricted the planting of tobacco so that the area devoted to its culture did not generally increase much faster than the domestic demand. The variation both in the price and the quantity of exports from year to year were such as would be expected from favorable and unfavorable crop years rather than from any permanent change in the conditions of supply and demand. The decrease in the price of tobacco indicated that the domestic demand measured in money did not increase during the whole decade quite as fast as the supply, and that other sources of supply were opening up about as fast as the demand abroad increased. However, if we compare the two halves of the decades, it appears that the better facilities for transportation and the cheaper machinery and other supplies had enabled tobacco planters to decrease the money cost of production in spite of the higher cost of slaves. The price of tobacco

had not decreased so fast as prices of other commodities, or, in other words, the demand for tobacco measured in other commodities was growing faster than the supply. The increased cost of the slave was the most effective single factor in restricting the production of tobacco, but when the inelasticity of the demand for that commodity is taken into consideration this seeming misfortune of the tobacco planters must be counted a blessing in disguise.

Flour was the agricultural export third in importance. The shipments during the decade amounted to 9,120,000 barrels, valued at 49.1 million dollars. The exports for 1821–1825 were 4,460,000 barrels, valued at $5.46 a barrel; for 1826–1830 4,660,000 barrels, valued at $5.24 a barrel. The second half of the decade yielded a slightly increased total value of exports, but at a slight decrease in the price received.

The inspections reported for 1821–1825 were 8,460,000 barrels and for 1826–1830 11,451,876 barrels. This indicates that the domestic market for flour had increased in importance much faster than the foreign, since the exports in the first period were 53 per cent. and in the last period but 41 per cent. of the inspections.[1] The inspections indicate quite plainly the importance of the Erie canal to the flour trade. Before its opening in 1825 there was no increase and in two years out of the three a decline in the amount inspected. After the canal was opened every year of the decade showed an increase in the amount of inspection. The total in 1830 was 67 per cent. larger than in 1821. The importance of the canal is further emphasized by the increase in the value of the land in its immediate neighborhood, which is said to have amounted to forty or fifty million dollars in five years.[2] But the inspection returns indicate that this improvement in transportation facilities was by no means confined to New York state. This is shown as well by figures

[1] The states that had an export trade in flour usually had laws requiring its inspection. The figures given above include the inspections at New York, Albany, Philadelphia, Baltimore, Georgetown, D. C., Alexandria, Fredericksburg and Falmouth, Richmond, Petersburg, and New Orleans.

[2] *Niles*, vol. xxxviii. p. 362.

on the actual construction of canals. In 1830 New York state had 564 miles of completed canals, Pennsylvania 480 miles, Virginia 120 miles. There were 70 miles completed in the West, 72 in New England, and 43 in the South.[1]

The West Indies had been our most important customer for flour during the decade. Among them Cuba was the first in importance, the Danish West Indies and Hayti second and third. South America ranked next to the West Indies in the amount of flour taken. However, the exports to both of these customers were decidedly less in 1826–1830 than in 1821–1825. The exports to England had been of but very little importance till 1829. It was only the exceptional demand from that country in the last two years of the decade that prevented the exports in 1826–1830 falling decidedly below those in 1821–1825.

Turning to a more detailed study of the reports we find that the quantity exported in 1821 was greater than in any other year except the last. Any increase in price was accompanied by a sharp fall in the amount exported, and when prices declined again the old foreign markets were not regained. It would seem that the conditions of production were such that competition did not act as in the case of cotton to increase output in prompt response to every increase in price. The conclusion must be that in spite of some improvement in facilities for transportation the United States had not materially advanced her position as a producer of wheat flour for the world market. It does not follow from this that the condition of the wheat farmer was not greatly improved. The ruling value of wheat in other commodities was higher in the last part of the decade than in the first. The time and labor cost of producing and marketing it was considerably decreased, and in response to the increase of the consumption demand we find a steady increase in the amount of its annual production.

Among the agricultural exports, the various products of animals rank next in importance, though their total value for the decade was only 26.5 million dollars, or but 46 per cent. of that of

[1] *Niles*, vol. xxxviii. p. 433.

wheat flour. There are not sufficient data as to prices to render their presentation or discussion of any value. These exports in the last half of the decade were $100,000 in excess of those in the first half. So far as animal products were concerned the United States was practically of no more importance in the world market in 1830 than she had been in 1820. When we take into consideration the great increase in the number of farms it becomes evident that this part of our export trade had suffered a great decrease in importance from the individual farmer's point of view.

The report for rice was of a more satisfactory character to the planters. The total value exported in 1826–1830 was 11.4 million dollars, which was 31 per cent. more than that for the first five years. This increased value of total exports had resulted from an increase in the total amount exported in the second half of the decade by 47 per cent. The southern planter had seen a relatively greater increase in the total returns from this product than from cotton, yet the quantity of rice exported had increased but little more than half as fast as that of cotton. Practically all the increased export of rice went to Europe. Holland, alone, increased her imports by over 160 per cent. The increase in France was just 100 per cent., while the other countries of central Europe all imported more. England did not increase her imports, and there was practically none exported to Spain or the other Mediterranean countries. The shipments to the West Indies were of considerable importance, amounting to nearly three eighths of the total in the first half of the decade and to nearly one third in the last half.

Corn and corn meal are the only exports that show an increase in price. In the first five years 3,520,000 bushels exported were valued at $1,870,000, while 3,530,000 bushels exported in the second half were valued at $2,010,000. The export value of 760,000 barrels of meal in the first half was $2,180,000; in the second half 780,000 barrels were valued at $2,400,000. These figures enforce the fact even more strikingly than those on the flour export, that even if there had been a

demand from abroad at the ruling prices the transportation facilities of the United States had not yet brought the rich field of her interior near enough to the seacoast so that she could take her place as a producer of breadstuffs for the world at large.

The most remarkable showing of the decade was undoubtedly that made in the exports of manufactures. In every year of the second half of the decade the exports for 1821 were exceeded by over 100 per cent. No year failed to show an increase in the annual export until 1828. The total export of manufactures for the decade, $50,892,000, was exceeded only by exports of cotton and exports of tobacco. The increase of the second half of the decade over the first was $11,718,000. The corresponding increase for the great staple, cotton, had been only ten million dollars, and the total exports of all other commodities had actually fallen off about three million. This increase in the exports of manufactures was to a large degree confined to articles familiarly known as "Yankee notions," cotton manufactures and gold and silver coin of our own minting.[1] "Yankee notions" must not be construed too narrowly, for the list includes such articles as printing presses, books and maps, glass manufactures, etc. These articles were not separately listed before 1826. The treasury reports show that exports of "manufactured articles not distinguished in the returns" increased from $6,520,000 in the first half of the decade to $14,834,000 in the second half. Manufactures such as soap, candles, boots and shoes, hats and caps, manufactures of wood, etc., which had been of sufficient importance to be distinguished in the returns for 1821 increased from an export of $2,262,000 in that year to $3,169,000 in 1825, but the export of these articles was less in 1829 and 1830 than in 1824 and 1825. Their total for the first half of the decade was $13,535,000 and for the second half $16,471,000. The largest gains in this second list were made in hats and caps and manufactures of iron, both of which increased a little over 100 per cent.

[1] This export of coin amounted to four million dollars in the last half of the decade. It is not separated from the other items in the first half.

The increase in exports of products of the sea in the second half of the decade was a little over half a million dollars, or between 6 and 7 per cent. The exports of products of the forest declined from $21,938,000 to $19,059,000. This was the only considerable decrease in any of the large divisions of our export trade, and the decrease was practically confined to the exports of ashes and naval stores. The former decreased from $6,667,000 to $4,226,000, and the latter from $2,239,000 to $1,843,000.

The value of the foreign goods imported in this decade (excluding gold and silver) was $729,489,000. The value of the re-exports was $162,009,000. The difference between these two amounts is $567,480,000. This difference is sometimes spoken of as the value of the foreign goods retained for home consumption. In so using it one should remember that it is only a very crude approximation, and probably in most cases much below the real value. As an extreme instance of the errors that may arise from such a method of computing home consumption the case of spices in the first half of this decade may be cited. The difference between the quantities of spices imported and re-exported was five million pounds, and this probably coincided very nearly with the actual consumption of foreign spices in this country, yet the export value of the spices that were re-exported was $144,000 in excess of the value of all spices imported during that period. This is a very extreme case of what always occurred in some measure. Nevertheless, crude as this approximation is, it furnishes us the best means we have for comparing total consumption of foreign goods in different periods. The imports of the precious metals during the decade had amounted to $69,145,000, their exports to $71,528,000.

The value of imports for the first half of this decade excluding gold and silver was $369,233,000. The value of re-exports was $85,587,000. The value of home consumption as indicated by these amounts is $283,646,000. The corresponding amounts for the second half are $360,256,000, $76,422,000, and $283,834,000. This would indicate an increase of less than 1 per cent. in the

quinquennial consumption of foreign goods. Moreover, a study of the returns in detail, has convinced me that this method does not give so great an undervaluation of the home consumption in the second quinquennium as in the first. The population had increased about 15½ per cent. Yet it is probable that the value of the foreign goods consumed was less in the second half of the decade than in the first. The larger consumption of foreign goods in the first quinquennium is in part explained by the marketing of the surplus stock of precious metals. The exports of gold and silver in that period were $43,473,000, exclusive of the domestic exports which were not distinguished from other items until 1826. The imports amounted to only $31,063,000. This indicates a net export of nearly 15 million dollars. On the contrary the imports of the precious metals in the second quinquennium was $38,082,000, while the total exports were only $28,055,000. That is, there was a net import of $10,027,000.

The value of foreign goods consumed was less in 1821 than in any other year of the decade. The average individual consumption that year was between four and five dollars. The value of foreign goods retained for home consumption was greater in the aggregate and per capita in 1822 than in any other year of the decade, and amounted to nearly 70 million dollars. The conditions reviewed in a former article[1] explain sufficiently the small purchases in 1821 and the large increase in the next year was probably intended to bring the stock of foreign supplies to its normal proportions rather than to afford the means for extraordinary indulgence. Other years of large aggregate consumption of foreign goods were 1825 and 1828. The consumption in these years amounted to about 66 and 68 million dollars. These amounts probably indicate an actual increase in the use of foreign goods. The cause for this increase in 1825 was the very high price of cotton and its large sales to foreigners. In 1828 two causes were at work. The current balance on international account was in favor of the United States in part through her services as an ocean carrier and in part through the

[1] JOURNAL OF POLITICAL ECONOMY, vol. viii. No. 1, pp. 34–57.

sale of securities in Europe. In addition to this the prospect of the higher tariff duties passed that year encouraged large importations before the law should come into force. The effect of the law in discouraging the consumption of foreign goods is probably shown in the decline to an average of about 54 million dollars in 1829 and 1830.

The imports for this period naturally fall into three principal divisions, food products, miscellaneous commodities, and manufactures. The study of the importation and consumption of foreign food products will now be taken up in detail.

Foreign food products made up a little more than a fourth part of the aggregate value of imports in the first half of the decade. Their re-exports were a little less than a fourth part of all re-exports. The indicated value of foreign food products consumed was 69.6 million dollars. In the second half of the decade imports of foods declined in value eight, re-exports seven, million dollars, decreasing the value of the quinquennial consumption to 68.5 millions. As the population had increased about 15 per cent. this indicates a corresponding decrease in the individual consumption of foreign foods. Fortunately there was a record kept of the quantities of foods imported and re-exported which enables us to ascertain the facts as to their consumption much more exactly than they are indicated by the figures just given.

The indicated value of foreign wines consumed in the first half of the decade was $6,312,000, in the second half $6,589,000, an increase of a little over 4 per cent. But the difference between quantities of wine imported and re-exported which must represent very nearly the actual consumption, was 11,285,000 gallons for the first half of the decade and 13,626,000 for the second half. The real increase in consumption was therefore 2,341,000 gallons or 21 per cent. There had been an increase in the individual consumption of foreign wines instead of the decrease that would be inferred from the differences between the values of imports and re-exports. The error in this case arises from the increased consumption of the cheaper wines

imported from France and Spain, which of course did not produce a corresponding increase in the expenditures for wines. This increased importation of cheap wines had reduced the average import price from 55 to 50 cents per gallon.

The consumption of foreign spirits decreased from 20,374,000 gallons in the first half of the decade to 13,809,000 gallons in the second. The decrease in the approximated values was from $11,334,000 to $6,006,000. Here as in the case of wine there was a decrease in the price per gallon which would cause an inference as to consumption based on the decrease in the values to be incorrect. The most of the decrease in the consumption of spirits was the result of the tariff of 1828. The consumption in the years 1821–1823 was 11,683,000 gallons. In the first three years of the second quinquenniun it was 11,134,000 gallons, a decrease of only 549 gallons. The consumption in 1824 and 1825 was 8,691,000 gallons but in 1829 and 1830 it had fallen to 2,675,000 gallons. That is of the total decrease amounting to 6,565,000 gallons, nearly 95 per cent. is found in the last two years. The duty on spirits had been increased 15 cents on the gallon, and although the import price was five cents lower for the years 1829 and 1830 than it had been for the two preceding years, the consumer was thus compelled to pay 10 cents more per gallon than formerly which probably accounts for this remarkable decrease.

Molasses was one of the most important of our food imports during this decade. The value consumed constituted nearly 16 per cent. of that of all foreign foods. The consumption in the first half of the decade was 59,671,000 gallons, in the second 58,973,000 gallons. The total decrease in the consumption of molasses was not nearly so striking as in spirits, but the influence of the tariff of 1828 was even more in evidence in the latter than in the former. In the opening trienniums of the two halves of the decade the consumption of molasses was 34,106,000 gallons and 40,614,000, an increase of 6,508,000. In the closing bienniums the consumption was 25,653,000 and 18,524,000 gallons, a decrease of 7,129,000 gallons. Comparing the consumption in

the last biennium with that of the two years preceding we find that the decrease amounted to 8,197,000 gallons. The duty on molasses had been increased five cents per gallon, and the drawback hitherto paid on exports, of rum made from foreign molasses, was withdrawn. A temperance movement inaugurated in 1826 was of sufficient extent to materially reduce the domestic consumption of rum and the rapidly increasing use of coffee operated in the same direction. As the United States was the principal customer of the West Indies for molasses this marked decrease in our demand caused a decline in the average import price from 21 cents in the two years 1827 and 1828 to 13⅓ cents in the years 1829 and 1830. This affords a very interesting illustration of legislation operating to reduce the demand for a foreign commodity and thereby causing a decrease in the import price of that commodity exceeding the increase in the duty paid by the domestic consumer.

The returns in regard to tea are decidedly interesting because of the very small changes from the first to the second half of the decade. The total imports fell from 38,969,000 pounds to 38,928,000 pounds. There was a very slight increase in the price, the total value increasing from $12,060,000 to $12,403,000. The greatest relative change was in re-exports which increased from 7,644,000 pounds to 8,629,000 pounds. The price of tea re-exported fell from 50 to 48 cents per pound. The domestic consumption decreased from 31,325,000 pounds to 30,299,000 pounds. That is, without any material change in the price the individual consumption of tea had fallen off about 15 per cent. This was not the result of more stringent economy but the direct consequence of the very great increase in coffee drinking.

Changes in the returns of the coffee trade from the first to the second quinquennium are as noticeable as was their absence in the case of tea. Coffee was easily the most important item among the imports of foods. It constituted more than one fourth of their whole value in both halves of the decade. In the first quinquennium nearly one half the value of re-exports was in coffee. The average import price, which was 16½ cents

in the first half of the decade, fell to 9½ cents in the last. In response to this fall in price imports increased from 168,832,000 pounds to 245,188,000 pounds. In spite of the lower price re-exports decreased from 81,496,000 pounds to 80,529,000 pounds and their value fell from $14,182,000 to $7,855,000. This loss in the value of re-exports of coffee made up over three fourths of the decrease in the value of all re-exports of foods. Estimating the value of the home consumption in the usual way we find that it increased from $13,547,000 in the first half to $15,377,000 in the second, or 13.5 per cent. This shows an increase smaller than that in population. But the quantity retained increased from 87,336,000 pounds to 164,659,000 pounds or 88.5 per cent. While the values would seem to indicate a slight decrease in the individual consumption of coffee in the United States, the quantities show that there was an increase from a consumption by the average individual, of about eight pounds to nearly fourteen pounds. The increased use of coffee was not caused by the reduction of price alone. The increasing demand for temperance beverages found in coffee an acceptable substitute for the rum used in former years. The partial substitution of coffee for tea was also due in part to other causes than the change in price. Coffee was the product of our nearest neighbors. It was necessary to go around the world for tea. The West Indians were glad to take our own products in exchange for their coffee. Indeed they usually paid us a balance in the precious metals. The people of the Orient had little use for our commodities and even without any increase in our consumption of tea they received much the larger part of our exports of gold and silver.

Sugar was the food import of second importance. Indeed, foreign sugar exceeded coffee in the value consumed in this country. The re-export of sugar was far less than that of coffee. In the first half of the decade the value of the re-exports of coffee had been over half the value of its imports, while the value of re-exports of sugar constituted a little less than one third the value of all imports of sugar. There was an increase

in the average import price of sugar from 5.7 cents per pound to 5.9 cents, if the customhouse returns are to be accepted. One suspects, however, that the West Indian planter did not receive so much for his sugar as the importer wished the consumers to believe that he did. Indeed, it was said at the time that sugars from Porto Rico were sold at so low a price in New York City that after paying freight and other expenses there remained but a cent a pound for the planter.[1] Furthermore the difference between the price reported by the importer and the price of sugar in the United States during 1830 was not enough to warrant the importations made in that year. But even if we suppose that the increased price of foreign sugar was a fiction of the importers the decrease in the price of sugar to the consumer in Philadelphia amounting to nearly 20 per cent. was quite sufficient to discourage the business of importing sugar.[2] It is a matter of no surprise therefore that the quantity of sugar imported fell from 374,782,000 pounds in the first half of the decade to 368,333 pounds in the second. The re-exports of sugar fell from nine to five million pounds, although their value fell only from 6.7 million to 5.3 million dollars. The domestic consumption of foreign sugars increased from 282,849,000 pounds to 316,092,000 pounds, or 11 per cent. This shows a decline in the individual consumption of foreign sugars, but the increase in the consumption of sugar produced at home probably more than counterbalanced it. The government encouragement of the sugar industry seemed to be quite effective during this decade. The largest crop of sugar in the first half of the decade was less than 30 million pounds.[3] The generally accepted estimate of the crop of 1828 is 88 million pounds although at that time, the claim was made that it amounted to 100 million pounds.[4] The important point, however, is the fact that while prices of foreign sugar had increased, the price of sugar in New Orleans had fallen over 25 per cent. This decrease in the

[1] *The Reports of Committees, Convention of Friends of Industry*, p. 72.

[2] *Ibid.*, p. 71.

[3] *Niles*, 1821–1825.

[4] *Reports of Committees, Convention of Friends of Industry*, p. 68.

price was undoubtedly due to the increase in domestic production. Nor can there be any question that the decision of the southern planter between the planting of cotton and sugar was often determined in favor of the latter when the former would have been chosen but for the duty of three cents per pound on the importation of foreign sugar.

The consumption of foreign fruits increased from 24,067,000 pounds to 32,458,000 or 35 per cent. This large increase in the consumption of foreign fruits was accomplished with only a fractional reduction in the import price. The quantity of re-exports remained practically the same but their value increased over 40 per cent.

In the first half of the decade over three fourths of all spices imported were re-exported and as has been noted before, the export value of that three fourths exceeded by $144,000, the entire value of the imports. The quantity imported was 21,197,000 pounds. In the second half of the decade it increased to 24,092,000 pounds, while the re-exports fell from 16,116,000 pounds to 11,607,000 pounds. The domestic consumption increased from 5,181,000 pounds in the first half to 12,485,000 pounds in the second half of the decade. This great increase in the consumption of foreign spices was probably, in large part, due to the decline in the average import price from 12.6 cents to 9.4 cents per pound.

To sum up, in the last half of the decade the average American was using more of foreign wines, coffee, fruits and spices and less of foreign spirits, molasses, tea and sugar than in the first. He was obtaining all of these articles except tea at lower prices, and the rise in the price of tea was only one cent per pound.

Under the head of miscellaneous are grouped various raw materials and crude manufactures. Their increased importation was a good index to the rapid growth of our own manufactures during the period. The total value of these commodities retained for home consumption, was $44,821,000 in the first half of the decade and $44,275,000 in the last. The value of foreign indigo consumed increased from $1,300,000 to three times that

amount. The consumption of dye and tropical woods increased from $240,000 to $1,340,000 or nearly sixfold. The largest item in imports of raw materials, raw-hides, increased from $8,170,000 to $9,090,000. In copper, brass and tin the increase was from $3,800,000 to $6,180,000. The treasury returns do not generally give the quantities of these imports. From those that are given it is to be inferred that there was a general decline in their prices. But even if prices remained the same it is evident that the domestic manufactures, in which the articles already mentioned were used, had been increasing at a much more rapid rate than the population.

The most notable decline in the imports of this group was that which took place in lead. The consumption of lead during the first half of the decade was valued at $980,000, during the second at $340,000. The price of lead, however, as indicated by our export price on shipments to France declined 50 per cent. from 1821 to 1830. The duty on lead under the tariff act of 1816 had been one cent per pound. In 1824 it had been raised to two cents, and in 1828 to three. The increase of the tariff in 1824 was followed by the rapid development of the lead mines on the upper Mississippi. In 1825 the production from these mines had amounted to less than half a million pounds, in 1829 it amounted to nearly 14 millions. The consumption of foreign paints, ochre and so forth, declined from 1.3 million dollars to $680,000. In 1829 and 1830 the consumption was only about $1000 a year.

The total value of manufactures retained for home consumption in the years 1821–1825 was $167,209,000, in 1826–1830, $171,030,000. Some attempt will be made to consider the price movement in these commodities as the different items are taken up in detail.

Industrial progress in the nineteenth century has, at each step, demanded increasing supplies of iron and its manufactures. At no time or place has this demand been more imperative than in the United States from 1820 to 1830. This was the critical period in the change from hand to machine industry in the North

and East. The effects of the increased consumption of iron and steel afford the best evidence of its increased use. In 1820, there were about 220,000 spindles in our cotton factories, in 1830 there were six times that number.[1] The improved quality, and the decreased prices, and the consequent increased use of agricultural implements largely made of iron and steel co-operated with the wonderful fertility of the lands of the lower Mississippi valley, to give our planters an unrivaled position in the field of cotton production before the close of the decade.[2] The introduction of steam driven machinery in the sugar industry of Louisiana in 1822 was probably the most effective factor in increasing the product of that state from 30,000 hogsheads to three times that amount before 1830.[3] Without the rapid development of steam navigation, the remarkable expansion in the area opened up for agriculture in the Northwest would have been impossible.[4]

The intensity of this demand in the West at the beginning of the decade, is indicated by the price of hammered bar iron which was sold for $200 a ton in Pittsburg and Cincinnati.[5] The average price in foreign ports, of the bar iron imported into the United States during 1821, was less than $55 a ton. The hammered bar iron imported that year probably cost about $57 a ton.[6] After adding the import duty of $15 a ton to this cost, there still remained nearly two thirds of the western price for freights, and profits to the importer. Such figures as these explain, in part, why the people of the West wished to encourage the domestic production of the commodities they consumed and why they were such positive protectionists during this period.

At the beginning of the decade we depended on importation for much more than half of our supplies of iron and steel and

[1] *Woodbury's Report, Executive Document*, XXIV Congress, first session, No. 64.

[2] *Reports of Committees, Convention of Friends of Industry*, 1831, pp. 18 and 19.

[3] BISHOP, *History of Manufactures*, vol ii. p. 275; *Reports of Committees, Convention of Friends of Industry*, 1831, p. 66.

[4] BISHOP, vol. ii. p. 341.

[5] *Reports of Committees*, p. 18.

[6] *Reports of Committees*, p. 17.

their manufactures. The domestic production of pig iron in 1820 was only 20,000 tons.[1] The importation of unmanufactured iron and steel in the fiscal year 1821, was 22,925 tons. This exceeded in value, by less than 10 per cent., the imports of manufactures of iron and steel that year. The domestic product and the importations just compared are both abnormally small, but, as near as can be ascertained, both are taken at the extreme limit of their depression.

The conditions here reviewed would lead one to expect an increased importation of iron and steel, and such an increase occurred. In the first half of the decade imports of iron and its manufactures amounted to $22,214,000, in the second to $28,643,000, an increase of over 30 per cent. The value of the iron and steel increased 36 per cent.; that of their manufactures only 26 per cent. Nevertheless, the manufactures still constituted 56 per cent. of the 29 million dollars worth imported. The quantity of these goods paying specific duties increased a fraction less than 24 per cent. Their value increased nearly 26½ per cent.[2]

Whether the imports under the ad valorem list advanced in price to a like degree cannot be ascertained. They were made up almost altogether of manufactures, and the decreased relative importation of the latter might be taken to indicate that they had advanced even more in price than the raw materials. This, however, would not be a safe assumption, since the same result might follow from keener American competition at a lower range of prices. The most complete list of prices for materials and manufactures in the same place is that given for Pittsburg on page 18 of the Reports of Committees to the New York Convention of 1831. This gives in general the same variation in both, with an occasional greater reduction in the manufactured article than in bar iron. Everything considered, we may say that the increase in the importation of iron and its

[1] SWANK, *Iron in all Ages*, 2d ed., p. 377.

[2] This contrast is stronger if the opening and closing trienniums are compared. In these, quantities increased 33½ per cent., value 36½ per cent.

manufactures was probably a little less than 30 per cent., or at about twice the rate of the increase in population.

This rapid increase in the consumption of foreign iron would seem to warrant the opinion that the struggle for industrial independence, so far as that commodity was concerned, had been a failure, and that here at least the tariff legislation had not accomplished the desired end. A different view is obtained when we compare the increase in imports with the increase in domestic production.

Data as to the growth of the iron industry in the United States during this decade are exceedingly fragmentary. It appears that no estimate of the production has been made for any year of the first half of the decade. The estimate of a reputable authority as to the production of 1820 is 20,000 tons.[1] In 1822 the iron manufacture was still much prostrated.[2] These conditions were completly changed before the end of the decade. Swank gives the production in 1830 at 165,000 tons. The committee on iron of the New York convention of 1831, estimated it at 191,536 tons. Their estimate for 1828, based, however, on less complete returns, was 130,181 tons.[3] These figures indicate that the increase in domestic production from 1828 to 1830 nearly equaled in quantity the entire importation in 1821, and amounted to over one half that in 1830. In 1821 the domestic production provided about one third the supply consumed. In 1828 considerably over one half of our supplies came from our own furnaces. In 1830 they supplied about 75 per cent. of all iron consumed in the United States.[4] Our production of iron in 1830 was eight times that in 1820. During the same years the production of England had not doubled.[5]

These facts indicate the most gratifying progress toward economic independence in the iron industry. Viewed in light of the larger share of our supplies of iron that was produced at home,

[1] SWANK, p. 377. [2] BISHOP, vol. ii. p. 275. [3] *Reports of Committees*, p. 16.

[4] These estimates are necessarily very crude, but certainly approximate correctness closely enough for the general application here made of them.

[5] SWANK, p. 520. England's production in 1820 is placed at 400,000 tons, in 1830, at 677,417 tons.

and the remarkable gain in relative production in comparison with England, the large increase in imports ceases to be of significance as an index of our dependence on the foreign supply. It should, however, when considered in connection with the large increase in domestic production, be regarded as a striking indication of remarkable industrial activity in those branches in which larger operations involve an increasing consumption of iron.

The reduction in prices is no less striking than the increase in production. The figures given on page 477 show that in 1821, $128 were required to pay for the services of the men who brought hammered bar iron from Europe to Pittsburg.[1] In 1830 these men, instead of $128, received $20.70 for the same service. The iron cost $100 a ton in Pittsburg. Its price in Europe was $57.30, a fractional increase over the price of 1820. The duty paid to the government had been increased from $15 to $22.40. If Europe had furnished the same proportion of our consumption in 1830 that she did in 1820 her shipments to this country must have been nearly three times as great. There can be little question that such an increase in demand would have resulted in a marked advance in the European price. The remarkable development of the interior of the United States during this decade would have been much retarded had it not been for the even more remarkable development of the domestic iron industry which accompanied it.

According to the report of the committee on iron of the New York convention, two thirds of the iron consumers of this country, because of their location, shared the benefits of the decreased price of iron, equally with Pittsburg. But the benefits that arose from the competition between domestic and foreign iron do not appear to have been confined to the interior of the country. There are no means of telling what were the charges to the people of New York City on the importation of English bar iron in 1820, but it is to be inferred from the charges on hammered bar iron in the case of Pittsburg that the importer must have

[1] *Reports of Committees*, p. 17.

received a liberal reward for his services. There are data for 1830 that enable us to ascertain definitely what he was receiving in that year. The average cost of the rolled bar iron in England was $35.70 a ton. Each ton of this iron paid an import duty of $37. According to Gallatin, the average price received by the importer, during that year, in New York City, was only $74.50.[1] That is, after paying the English producer $35.70 and the duty of $37, the importer had $1.80 a ton left from which to pay charges of transportation and provide profits on his own business. This very small reward to the partners of the English manufacturer in supplying the American market with rolled bar iron is quite conclusive evidence that the competition from iron produced in the United States had been an effective factor in the reduction of the import price over $11 a ton between 1828 and 1830.

The consumption of foreign woolen manufactures so far as specified in the government reports amounted to $45,360,000 in the first half of the decade and to $36,941,000 in the second. The excess in the first half was the result of the extraordinary importation in 1822 and 1825. Those for 1822 were 70 per cent. in excess of those for 1821. Figures given on pages 252 and 253 of the second volume of Bischoff's work, *Woolen and Worsted Manufactures* indicate that the prices of woolens exported from England in the calendar year 1822 were nearly 30 per cent. lower than in 1820.[2] In addition to this decline in the price asked for her own product, England induced purchases from us by importing enough more cotton in 1822 than in 1821, and at enough higher price, to pay for this entire increase in our import of woolens. The first chapter of Bischoff's second volume makes it very clear that in 1821 the English manufacturers were anxious in regard to their market in the United States, and it would seem altogether probable that they offered American customers special inducements the next year. Bischoff's figures show that the prices of woolens advanced again during the middle of the

[1] *Senate Document*, XXII Congress, first session, No. 55, p. 55.

[2] The figures given by Bischoff are very crude material upon which to base a calculation of price, but are certainly sufficient to convince one of a very considerable decline.

decade and were higher in 1825 than they had been at its beginning. But when we consider that the increase in the price of cotton caused England's importations to be worth some 14 million dollars more in 1825 than they would have been at the price of 1823 it becomes quite evident that the real cost of woolens and probably all other imports was less to the American consumer in 1825 than in any other year of the decade.

Woolens were very much cheaper in the second half of the decade. Bischoff, speaking of two four-year periods ending in 1824 and 1828, says of the declared value of exports: "the price of wool having fallen 50 per cent., the declared value has fallen in the same proportion." It is not quite clear what he means, but the evidence of his whole book, enforced by Tooke's table of prices, establishes a very considerable decline. It may be stated as a strong probability that the smaller amount expended on foreign woolens in the second half of the decade provided for an undiminished consumption per capita.

The data bearing on the domestic woolen industry are quite as unsatisfactory as those concerning the manufacture of iron. It is known that under the abnormal stimulus of the War of 1812 the industry was rapidly developed. In 1815 the output of the factories was estimated at 19 million dollars worth annually.[1] The investment of capital was placed at 12 million dollars. One should remember that at the prices of 1815, 19 million dollars represented a much smaller output of cloth than the same amount of money would later.[2] The protection afforded by the act of 1816 was by no means so adequate as that given by the war and all witnesses join in giving testimony to the decline of the industry up to about 1820. With the more favorable conditions for manufacture described in the preceding chapter,[3] investments again increased and continued to do so in spite of the effort of the English manufacturers in 1822 to take possession of the American market. In 1824, the government granted a higher measure of protection both to wool and woolens. The increase

[1] BISHOP, vol. ii. p. 214. [2] *Ibid.*, p. 208.

[3] JOURNAL OF POLITICAL ECONOMY, vol. viii. p. 48.

of the duty on wool counterbalanced to some extent the effect of the increase on woolens so far as the factories were concerned. But since nearly half of the wool was manufactured in the household and also because many of the factory owners were themselves engaged in sheep farming, it was not really of large importance to the industry as a whole, how the tariff might be divided between the material and the manufacture.[1] Testimony taken by the Committee on Manufactures in 1828 goes to show that the investment of more capital in the industry followed the passage of this act but that the increased duties afforded no considerable protection from the influx of foreign woolen goods which, the manufacturers claimed, reduced prices from 33⅓ to 40 per cent. in the three years 1824–1827.[2] It is worthy of remark that, though the manufacturers charged this great decline in prices to heavy imports, they, nevertheless, admitted that on goods of exclusively domestic manufacture such as casinets and negro cloths prices had fallen as fast or faster.[3]

In spite of the lack of any exact data, some assertions may be made in regard to the woolen industry of this decade with considerable assurance. Its success, as at all other periods, was ardently desired by people in general, on the grounds of independence of foreign supply in time of war. It was handicapped, as in all other periods, by the high cost of its materials in this country. It attracted no considerable investment of capital except under the stimulus of some abnormal inducement, such as had been offered during the War of 1812 by the closing of ports because of hostilities. In this decade such inducement came first through the loss of credit abroad and the diminished profits of commerce and agriculture at home, and resulted in large investments from 1819 to 1823. This was followed by an appeal for higher protection, the passage of the tariff act of 1824, and another flood of investments soon halted under the sharp decline in prices resulting, in part at least, from increased imports.

[1] *American State Papers, Finance*, vol. v. p. 781 ff.

[2] *Ibid.*, p. 826. [3] *Ibid.*, p. 830.

Accompanying the considerable investments in capital resulting from these more or less artificial incentives, there are found two facts of considerable importance. The first of these was a large increase in the production of wool at lower price. But even with the tariff protection that had been granted the sheep farmers, there was little grounds for expecting them to supply the home market with either the very fine or very coarse wools. The second was the very great improvements in processes of manufacture which it was freely claimed put the United States on a level with England if the raw materials could be furnished at the same prices.[1] This claim rested on the further claims of more skillful and willing work people, and better machinery.[2]

In the light of the facts that have been reviewed, the claim made in 1831 that the factories were making 24 million dollars worth of cloth annually does not seem more than mildly exaggerated. But even if it were considerably exaggerated, it would yet remain true that while the per capita consumption of foreign woolens measured in yards had not decreased during the decade, the consumption of those produced at home had increased with quite remarkable rapidity.

The total value of foreign cotton goods retained for home consumption in the first half of the decade was $36,933,000, in

[1] Mr. Taussig quotes the following interesting testimony given to the Committee on Manufactures in 1828 and printed in the *American State Papers, Finance*, vol. v.: "Broadcloths are now made at much less expense of labor and capital than in 1825 by the introduction of a variety of improved and labor-saving machinery, amongst which may be named the dressing-machine and the broad power-loom of American invention" (p. 824). "Since the power-looms have been put in operation the weaving costs ten cents per yard, instead of from eighteen to twenty-eight cents" (p. 814). "The difference in the price of cloths (in the United States and in England) would be the difference in the price of wool, as, in my opinion, we can manufacture as cheap as they can" (p. 816). "The woolen manufacture is not yet fully established in this country, but I know no reason why we cannot manufacture as well and as cheap as they can in England, except the difference in the price of labor, for which, in my opinion, we are fully compensated by other advantages. We get those capable and willing to perform a much greater amount of labor in a given time. The American manufacturer uses a much larger amount of labor-saving machinery than the English" (p. 829).

[2] BISHOP, vol. ii. chap. 4.

the second half $34,102,000. These figures indicate with tolerable accuracy the relative quantities of cottons, measured in yards, that were imported in the two periods. The declared value of the cottons exported from England to the United States during the years 1826–1830 was only 1.6 per cent. less per yard than it had been in the years 1823–1825. It is evident that the increase in quality of the cottons demanded in the American market had been nearly as rapid as the general decline in the value of cottons. It is worth while to note that the consumption of foreign cottons in the first half of the decade would probably not have exceeded that in the last had it not been for the extraordinary importations of cotton goods in 1825. This importation, stimulated by the equally extraordinary demand for our raw cotton in England, exceeded the average value imported during the preceding four years by about five and one half million dollars.

The decrease in the consumption of foreign cottons, as indicated by the values, imported during the two halves of the decade was about 8 per cent. The increase in the domestic production consumed at home was over 50 per cent. It seems probable that had the demand for cottons increased as rapidly as that for iron, and had the tariff been as high on the more expensive cottons as on iron, the increase in our manufactures of cotton would have equaled that in iron. The factors that were responsible for the great increase that did take place may be enumerated as follows: cheaper inland transportation; lower prices of cotton in America, which increased the disadvantage of the European manufacturer, due to ocean freights; improved and less expensive machinery; the development of water powers in different localities; cheap labor, which was a possibility without hardship to the laborers on account of the extremely low cost of living in the United States at that time, and the protective tariff.

The consumption of foreign manufactures of flax declined in value from $12,759,000 in the first half to $10,046,000 in the second. In 1822 it amounted to $3,730,000. The consumption in that year was over 50 per cent. larger than in any other year

of the decade. It equaled in value 56 per cent. of the foreign cottons consumed in the same year. The year 1828 was second in the value of foreign flax manufacturers consumed by us. The value was a little less than two thirds of that consumed in 1822 and was but 28 per cent. of the value of cottons consumed in the same year. The consumption was relatively smaller in 1825 than in any other year, being but 20 per cent. of that of cotton. Our import statistics do not give the quantity of these goods imported. There are reasons, however, for supposing that there was a considerable decline in their price. According to Tooke's tables of prices the value of raw flax declined over 25 per cent. The weaving of flax was still done by hand, but the cost had in all probability been considerably reduced by the competition of hand weavers, driven out of the woolen and cotton industries. It is not reasonable to suppose that the resulting reduction in the price of linens could have been greater than the decrease in the value imported in the second half of the decade as compared with that imported in the first. It is safe to say that our consumption of foreign manufactures of flax, measured per capita declined considerably during the decade.

The consumption of foreign silks declined from $28,160,000 to $27,940,000. Tooke's prices do not establish clearly any decline in the prices of raw silk imported from Asia. There was a considerable decline in the prices of European raw silks. This in part explains why total imports from Asia declined from $14,974,000 to $12,027,000 and total imports from France advanced from $13,355,000 to $21,284,000. The Chinese and East Indian silks were also put at a disadvantage by the increase of the differential duty from 10 per cent. to 20 per cent. by the tariff act of 1824.

The industry of printing, stamping, and staining foreign silks was growing very rapidly. These silks when re-exported were valued much higher than when imported. If the increase in the valuation of re-exports from this cause could be ascertained, it would probably show that the value of foreign silks retained in the United States was greater in the last half of the decade than

in the first. Tooke's prices show a decline in European raw silk about equal to that in cotton and the cost of manufacture must have shared in the general decrease of manufacturing costs. It follows that, unless American wearers of silk were demanding a higher grade of goods as they did in foreign cottons, they consumed more yards of silk per capita at the end than at the beginning of the decade.

This detailed study of our exports and imports will be of little value unless it assists us to correlate more clearly and more correctly the forces and conditions, that were most effective in the economic progress of the United States from 1820 to 1830. The low and decreasing comparative cost of cotton must be taken as the most important phenomenon in any such correlation. Phenomena of hardly less importance, however, are found in the decreased comparative cost of manufactures throughout the country, and the increased relative value of agricultural products in the interior of the country.

It will not be necessary to repeat here the résumé of causes contributing to the decreased cost of producing cotton, already given. The unique adaptation of the soil and climate of the Gulf states may be referred to once more, as an altogether essential factor in the remarkable development of that section during this decade. A condition, however, without which even this remarkable adaptability would have been in a great degree ineffective, was the extraordinary increase in the demand, both foreign and domestic, for our raw cotton. This increase was due to the great improvements that had been made and were still being made in the processes of preparing, spinning, and weaving cotton. Improvements in the machinery of the textile industry were especially effective in increasing the demand for cotton at this time, because, in nearly every case, the new inventions were applied in the cotton industry with much greater ease than in the manufactures of woolens. This handicap on the consumption of woolens was further increased in the United States by the heavy duty laid on both raw and manufactured wool. It would seem that the tariff on cottons would have

discouraged their consumption in a like degree. This was not the case, however. The great investments of capital induced by the protection given it through the minimum provision of the act of 1816, had been followed by an activity in invention, a development of transportation facilities, and an application of water power to manufactures, that certainly argued very effectively for the influence of legislative provisions upon the industries of a country. The result of these combined improvements and the competition following upon large investments of capital, was such a reduction in the price of American cottons, that by the middle of the decade, the tariff on low-priced cottons was no longer any considerable tax on the consumer and the exportation of cotton manufactures was rapidly increasing. The demand for raw cotton from the manufacturers both in France and the United States was increased by their protective tariffs. The effectiveness of their combined demand in keeping up the price of raw cotton in 1825 has already been noticed. Mechanical difficulties in the manufacture of woolens, effective taxes on the consumption of woolens, and effective government encouragement of the manufacture of cottons were thus co-operating to increase the demand for raw cotton. This demand, moreover, was constantly growing because of the steady improvement in the texture, coloring, and designs of the fabrics themselves.

But, turning to the supply side of the question again, though the primary importance of the conditions of soil and climate are at once conceded, the devious interrelation of economic forces is well illustrated by the influence of some other, less important and yet significant, factors. Probably the most important of these was the sufficient supply of negro labor at an actually decreased cost of production and up to the end of this decade but slightly increased capitalized value.[1] Just at the time when the South became so engaged in producing cotton that it could no longer give the time of the slaves to the production of their own food and clothing, the river steamboat and machine weaving

[1] The market value was about two thirds as much in 1830 as in 1805. *Niles*, vol. xxxix. p. 238.

made it possible for the North to step in and take up that part of the work at half the expense that would have attended such operations in an earlier period. But if the reduced cost of maintaining the slave was of importance to the cotton planter, he was also fortunate in the decreased relative demand for the services of the slaves on the tobacco plantation, and in the fact that supplies of sugar from other sources having greater natural advantages, prevented any large increase in the demand for slave labor on the sugar plantations, even though that industry was allowed tariff protection sufficient to pay over half the cost of production. If these two industries had been equal competitors with cotton for slave labor would the United States have attained that easy supremacy as the world's producer of raw cotton which was conceded to her in 1830? It is not probable that the suggested condition of the labor market would have given first place to any of her competitors. Her advantages in soil and climate are conceded, and when the superior application of implements and machinery is added to these, one feels that the peculiar circumstances as to the supply of slave labor though of great importance, were not a decisive factor in the case. But the supply of commodities, implements and machinery from other sections of the country at prices that made their increased use profitable, brings us to the consideration of the decreased cost of manufactures.

The amount of this decrease has been indicated in the data presented in the study of the important imports. That this reduction included the cruder manufactures and other foreign products is illustrated by a comparison of certain prices in Cincinnati for the years 1819 and 1833. The price of mackerel fell from \$40 to \$8½; of Currier's oil from \$60 to \$18; of rosin from \$16 to \$2⅓; of coffee from 33 cents to 14 cents; of New Orleans sugar from 17 cents to 7½ cents.[1]

The most important factor in this decrease, the increased use of machinery, was operating throughout the civilized world. But there were other causes of considerable importance in large

[1] *Niles*, vol. xliv. p. 36.

degree confined to the United States. One of the most important of these was the shifting of investments from commerce to manufactures. The great increase in the amount of investments in manufactures has already been sufficiently considered. How far such increase was the result of decreased interest in foreign commerce is indicated by the reduced tonnage of our merchant marine engaged in foreign trade, which measured 593,825 tons in 1820 and but 537,563 in 1830.[1] Our patent laws must also be credited with a part of the great number of new mechanical appliances introduced during the decade. The inventions themselves were, in their turn, now cause and now the effect of the increased investment of capital in manufactures.

In the United States, moreover, the reduced cost of transportation equaled in effectiveness the increased use of machinery in bringing about this reduction in prices. Here capital and invention played much the same rôles as in the direct processes of manufacturing but direct assistance from both national and state governments was a much more important factor in increasing the facilities of transportation than tariff legislation in developing particular industries. The greatest and most successful of any of the state enterprises was the Erie canal. Many of the states followed the example of New York with varying degrees of success. As a result, the canals which in 1820 formed an inconsiderable part of our transportation system, in 1830 measured about 1300 miles, while it was reported that nearly 2000 miles more were in process of construction.[2] The reduction in freights brought about by the increased use of the canal was estimated at 66 per cent. before the end of this decade.[3] Prices of flour in eastern and western markets give good support to the estimate.[4]

The development of the country's own resources in raw materials, the large increase in the use of water power, and the decreased cost of raw materials that were necessarily imported were all noteworthy, though minor factors in the decline in the

[1] *Report of the Commissioner of Navigation, 1895*, p. 334.

[2] *Niles*, vol. xxxviii. p. 433. [3] *Niles*, vol. xl. p. 281. [4] *Ibid.*, p. 63.

price of nearly all commodities that the American farmer bought.

Barring the introduction of any new factors, the increase in the relative value of agricultural products on the farm is a necessary consequence of the forces and conditions that have already been considered. A factor that would in time operate in the opposite direction, was the rapid immigration into the Mississippi valley of a population that must devote itself largely to agriculture. Moreover, it is also true that the use of newly invented machinery and the opening up of more fertile lands was reducing the actual sacrifice cost of producing agricultural commodities nearly, if not quite, as fast as that of manufactures; and in the case of the great agricultural product of the South much faster. But of course it is at once recognized that cotton is an exception to the general rule in the case we are now discussing.

In spite of the two opposing forces just noticed, the reality of the increased relative value of farm products in the interior of the country cannot be questioned. Cincinnati prices indicating the extent of the decline of prices of other commodities have already been given. Prices for the same years, 1819 and 1833, in the same market show that farm products had advanced phenomenally. Flour, from \$1⅜ to \$4¼ a barrel; corn, from 10 to 30 cents a bushel; pork from 1½ to 3 cents a pound; whiskey (at that time a country product), from 14 to 30 cents.[1] Even in New England, according to the carefully prepared tables of retail prices given by Carroll D. Wright in the Massachusetts Statistics of Labor, 1885, the agricultural conditions had gained in relative advantages, upon those of manufacturing, from the first to the second half of the decade.

Since this gain in values of farm products was made in spite of more favorable conditions of production and a constantly growing supply, its explanation must necessarily be found on the demand side of the equation. The changes there are quite

[1] *Niles*, vol. xliv, p. 36.

in evidence. Bear meat no longer formed a considerable item in the winter store of provisions. The "new comer" steadily increased his demand upon older settlers. New non-agricultural communities were already established on the western margin of migration.[1] But, beyond question, the most important increase in the demand arose from industrial and economic changes in the South and East and improvements in transportation facilities, the combined effect of which made it possible even so soon to look upon the Mississippi valley as the grain field and pasture land of the whole country. Moreover the building up of the new transportation systems contributed very considerably to the demand for farm products along the lines of construction. The extent of the movement of western products to the East is indicated by the fact that in 1830 Rochester, New York, alone imported 200,000 bushels of wheat from Ohio, and, according to the Rochester *Daily Advertiser*, was sending money into that state for the purchase of produce at the rate of $75,000 a month. In addition to the increase in domestic demand, changes in the laws of England had created a demand for western wheat to be exported by way of the St. Lawrence River and Canada. This demand, together with the construction of the Ohio canal, had caused the price of wheat far in the interior of the state to be much higher than it had been ten years earlier on the Ohio River, the only outlet to distant markets.

WORTHY PUTNAM STERNS.

THE UNIVERSITY OF CHICAGO.

[1] See notice of western lead mines, p. 474.